

## Earliest Possible Day of Full Bloom [\(View\)](#)

You have  $n$  flower seeds. Every seed must be planted first before it can begin to grow, then bloom. Planting a seed takes time and so does the growth of a seed. You are given two **0-indexed** integer arrays `plantTime` and `growTime`, of length  $n$  each:

- `plantTime[i]` is the number of **full days** it takes you to **plant** the  $i^{\text{th}}$  seed. Every day, you can work on planting exactly one seed. You **do not** have to work on planting the same seed on consecutive days, but the planting of a seed is not complete **until** you have worked `plantTime[i]` days on planting it in total.
- `growTime[i]` is the number of **full days** it takes the  $i^{\text{th}}$  seed to grow after being completely planted. **After** the last day of its growth, the flower **blooms** and stays bloomed forever.

From the beginning of day  $0$ , you can plant the seeds in **any** order.

Return the **earliest** possible day where **all** seeds are blooming.

### Example 1:



**Input:** `plantTime = [1,4,3]`, `growTime = [2,3,1]`

**Output:** 9

**Explanation:** The grayed out pots represent planting days, colored pots represent growing days, and the flower represents the day it blooms.

One optimal way is:

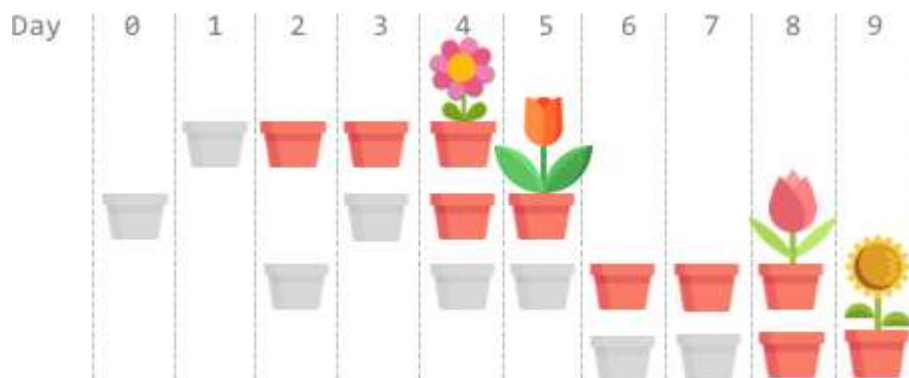
On day 0, plant the  $0^{\text{th}}$  seed. The seed grows for 2 full days and blooms on day 3.

On days 1, 2, 3, and 4, plant the  $1^{\text{st}}$  seed. The seed grows for 3 full days and blooms on day 8.

On days 5, 6, and 7, plant the  $2^{\text{nd}}$  seed. The seed grows for 1 full day and blooms on day 9.

Thus, on day 9, all the seeds are blooming.

### Example 2:



**Input:** `plantTime = [1,2,3,2]`, `growTime = [2,1,2,1]`

**Output:** 9

**Explanation:** The grayed out pots represent planting days, colored pots represent growing days, and the flower represents the day it blooms.

One optimal way is:

On day 1, plant the 0<sup>th</sup> seed. The seed grows for 2 full days and blooms on day 4.

On days 0 and 3, plant the 1<sup>st</sup> seed. The seed grows for 1 full day and blooms on day 5.

On days 2, 4, and 5, plant the 2<sup>nd</sup> seed. The seed grows for 2 full days and blooms on day 8.

On days 6 and 7, plant the 3<sup>rd</sup> seed. The seed grows for 1 full day and blooms on day 9.

Thus, on day 9, all the seeds are blooming.

### Example 3:

**Input:** `plantTime = [1]`, `growTime = [1]`

**Output:** 2

**Explanation:** On day 0, plant the 0<sup>th</sup> seed. The seed grows for 1 full day and blooms on day 2.

Thus, on day 2, all the seeds are blooming.

### Constraints:

- `n == plantTime.length == growTime.length`
- `1 <= n <= 105`
- `1 <= plantTime[i], growTime[i] <= 104`